AF

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/866,543	05/25/2001	David E. Patterson	3017-56	6399

7590 06/07/2004

LAURENCE A. WEINBERGER
SUITE 103
882 S. MATLACK ST.
P.O. BOX 1663
WEST CHESTER, PA 19380-0053

EXAMINER	
ZEMAN, MARY K	

ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/866,543	PATTERSON ET AL.	
	Examiner	Art Unit	
	Mary K Zeman	1631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) *4-9* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 10-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-13 are pending in this application. Claims 4-9 stand withdrawn from consideration as being drawn to a non-elected invention. Claims 10-13 are newly added.

This application contains claims 4-9 drawn to an invention nonelected with traverse in the Paper received 6/18/02. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Newly submitted claim 13 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claim 13 is drawn to a computer system which comprises hardware components, as well as non-functional descriptive material (data). This invention is classifiable in Class 707, subclass 102. This invention requires search and consideration of art not required for the originally examined claims. Because the Examiner agreed to entertain such claims in this application in the Interview of 1/21/04, Claim 13 will be examined in this action.

Applicant's arguments filed 3/2/04 have been fully considered but they are not completely persuasive. Any rejection not repeated below has been withdrawn.

Rejections maintained

Claims 1-3 remain rejected and new claims 10-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. *To the extent this rejection is newly applied, it is necessitated by Applicant's amendments.*

Applicant argues that the claims are not drawn to abstract ideas, and are not nonfunctional descriptive material. Applicant asserts that the data claimed is similar to that of the claims discussed in AT&T Corp v. Excel Communications (1999). This is not persuasive, as Applicant's claims are not limited to a particular type of data value having a specific useful non-abstract result. The claims are drawn to a virtual library of parts or components that can be used to make chemical structures. This is not even a library of actual chemicals, but merely a collection of characterization data, structural variation, combinatorial reactions and molecular descriptors of components that can make up a structure. This is not comparable to a PIC indicator, which has a specific meaning, and a specific value, and immediate use.

Further, the claims are non-statutory, as the non-functional descriptive material is merely a compilation of data in space. Any data, whether functional or non-functional data are non-statutory when claimed as descriptive material *per se*. Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759. The claimed libraries are not a data structure, and have no interrelationship with a computer, or computer program. MPEP 2106 states: "Data structures not claimed as embodied in computer-readable media are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory."

Applicant is further referred to MPEP 2106: "When nonfunctional descriptive material is recorded on some computer-readable medium, it is not statutory since no requisite functionality is present to satisfy the practical application requirement. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make it statutory. Such a result would exalt form over substance. In re Sarkar, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978) ("[E]ach invention must be evaluated as claimed; yet semantogenic considerations preclude a determination based solely on words appearing in the claims. In the final analysis under 101, the claimed invention, as a whole, must be evaluated for what it is.") (quoted with approval in Abele, 684 F.2d at 907, 214 USPQ at 687). See also In re Johnson, 589 F.2d 1070, 1077, 200 USPQ 199, 206 (CCPA 1978) ("form of the claim is often an exercise in drafting"). Thus, nonstatutory music is not a computer component and it does not become statutory by merely recording it on a compact disk. Protection for this type of work is provided under the copyright law...

Where certain types of descriptive material, such as music, literature, art, photographs and mere arrangements or compilations of facts or data, are merely stored so as to be read or outputted by a computer without creating any functional interrelationship, either as part of the

stored data or as part of the computing processes performed by the computer, then such descriptive material alone does not impart functionality either to the data as so structured, or to the computer. Such "descriptive material" is not a process, machine, manufacture or composition of matter. (Data consists of facts, which become information when they are seen in context and convey meaning to people. Computers process data without any understanding of what that data represents. Computer Dictionary 210 (Microsoft Press, 2d ed. 1994).)"

Claims 1-3 remain rejected and new claims 10-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Agrafiotis et al. (5,463,564) *To the extent this rejection is newly applied, it is necessitated by Applicant's amendments.*

Applicant argues that Agrafiotis does not disclose the same types of data resulting from the same types of computations as those being claimed. Applicant argues that the methods of Agrafiotis are completely different, and therefor, the resulting libraries cannot be the same. This is not persuasive, as these are product-by-process claims to non-functional descriptive material. Applicant has the burden to demonstrate that the process steps recited in the claim produce material differences in the product being claimed. The MPEP discusses product-by -process claims in chapter 2100: "Even though product-by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by -process claim is the same as, or obvious from a product in the prior art, the claim is unpatentable even though the prior product was made by a different process." See MPEP 2113.

It is the examiner's position that the resulting product, the virtual library itself, which comprises chemical structures, or parts thereof, is the same. The product is a collection of data, indistinguishable from any other collection of data when looked at as a composition of matter or computer disk. (it is noted for the record that only claim 13 actually requires that the data be stored on a computer system, disk, or hard drive.) The virtual library of Agrafiotis, as admitted by Applicant (p 31), comprises chemical structures, or parts thereof, identified as "directed diversity chemical libraries."

The claims are drawn to data representations (virtual libraries) of selected molecules, those molecules being selected by a particular set of characterized data. These are product-by-

process claims drawn to nonfunctional descriptive material. Agrafiotis (USP 5,463,564- of record in 08/592132) discloses virtual libraries of molecules that could be created wherein the libraries comprise information about the possible structures such as molecular descriptors, characterization data, and common core features. As such, this disclosure provides the same non-functional descriptive material as that being claimed.

Claim 13 is drawn to a conventional computer system comprising a virtual library. Agrafiotis discloses programmed computers which store the virtual library disclosed. As discussed above, the nonfunctional descriptive material of the library is the same as that being claimed.

Conclusion

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary K Zeman whose telephone number is (571) 272 0723. .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P Woodward can be reached on (571) 272 0722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. **Should you have questions on the contents of the electronic file wrapper, or on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).**

MARY K. ZEMAN
PRIMARY EXAMINER
AU 1631
6/2/04